UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,372	10/11/2005	Masaharu Tamatsu	050-402	3926

35870   7590   05/29/2008
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ART UNIT	PAPER NUMBER
2164	

MAIL DATE	DELIVERY MODE
05/29/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

		Application No.	Applicant(s)
Office Action Summary		10/532,372	TAMATSU, MASAHARU
		Examiner	Art Unit	
		FARIBORZ KHOSHNOODI	2164	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>20 February 2008</u>.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1 and 8</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1 and 8</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>21 April 2005</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

Detailed Action

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114. Applicant's submission filed on February 20, 2008 has been entered.

Priority

2.   The priority claim to foreign application No. 2002-306296 filed on October 21, 2002 is

hereby acknowledged.

Specification

3.   The specification is objected to as fails to provide proper antecedent basis for the term

'computer readable medium' which appears in claims 1 and 8. See 37 CFR 1.75(d)(1) and MPEP

§ 608.01(o). Appropriate corrections required.

4.   Regarding claims 1 and 8 these claims cite a computer readable medium. In the absence

of any modifying disclosure of this limitation in the specification, the examiner interprets the

term 'computer readable medium' as excluding transmission media, signals, or any form of

energy, such that the claim clearly falls within a statutory class of invention as required under the

terms of 35 U.S.C. 101.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefore, subject to the conditions and requirements of this title.

5.   Claims 1 and 8 are rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter.

6.   Claims 1 and 8 are non-statutory because the claims cited "database accelerator". The

components claimed, *(i.e., A computer readable medium including a database accelerator)* is

interpreted as being implemented by software in the specification of instant application (Page 13

Par. [0086] Line 1, Page 14 Par. [0090] Line 4, Page 52 Par. [0338] Line 2). Software per se,

does not fall within a statutory category of patentability. Appropriate correction required.

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8.   Claims 1 and 8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Tamatsu

United States Patent Publication No. 2001/0011321 A1 in view of Levy et al. United States

Patent Publication No. 2003/0158842 A1 and further in view of Fujiwara et al. United States

Patent Publication No. 2003/0013445 A1.

As per claim 1:

        Tamatsu teaches a method/system, comprising: **a system that holds data records

having data items including primary keys** *(Par. 26)*, **primary blocks that store the data

records in the order of their primary keys** *(Par. 37)*, **and a location table that contains in

a contiguous region location table entries containing the addresses of the primary

blocks** *(Par. 29)*, **and an accelerator system that has a frond location table holding frond

location table entries in a contiguous region indicating the blocks identical to the location

table entries of each primary block** *(Par. 48)*, **and retrieval by means of the primary key

on said accelerator system is such that a binary search is performed using the frond

location table of the accelerator system to retrieve the frond location table entries with a

target key value to determine an object block and that retrieval relative to the record

within the block is performed relative to the primary block or overflow block in the

system** *(Par. 48 and 49)*.

        Tamatsu does not explicitly disclose for the primary system. However Levy et al. teach a

 system comprises **primary system** (i.e. "Alternatively, high QoS commands

are given priority in being handled by a primary database server
accelerated by the accelerator."(See Levy et al. Par. 49)).

　　　Therefore, it would have been obvious to a person in the art at the time the invention was made to modify the method disclosed in Tamatsu to have the primary system. This modification would have been obvious because a person having ordinary skill in the art, at the time the invention was made, having the teachings of Tamatsu and Levy et al. before him/her, to modify the system of Tamatsu to include the primary system of Levy et al., since it is suggested by Levy et al. such that, the primary database server means the primary system and the queries are performed faster by the primary database server (i.e., "Optionally,
at least some of the queries that can be handled by the
accelerator in view of the data hosted by the accelerator are
not handled by the accelerator, for example, since the queries
are handled faster by the primary database server."(See Levy et
al. Par. 43)).

　　　Tamatsu as modified does not explicitly disclose for the transmitting the information of the modification in the location table and communication mechanism. However Fujiwara et al. teach a method, **wherein said system transmits modification information of a location of any modification in the location table and a content of modification to any accelerator connected to the primary system when any modification occurs to the location table due to data addition, update, and deletion causing a data modification within the block** *(See Fujiwara et al. Par. 197)*; **said accelerator system has a communication mechanism receiving modification information from the primary system when any**

modification occurs to the location table due to data addition, update, and deletion causing

data modification within the block while transmitting information for completing the

application of the modification information to the system when the modification is

completed and a modification information application mechanism performing necessary

updating on the basis of modification information transmitted from the system *(See*

Fujiwara et al. Par. 9).

Therefore, it would have been obvious to a person in the art at the time the invention was

made to modify the method disclosed in combination of Tamatsu and Levy et al. to have the

transmitting the information of the modification in the location table and communication

mechanism. This modification would have been obvious because a person having ordinary skill

in the art, at the time the invention was made, having the teachings of combination of Tamatsu

and Levy et al. and Fujiwara et al. before him/her, to modify the system of combination of

Tamatsu and Levy et al. to include the transmitting the information of the modification in the

location table and communication mechanism of Fujiwara et al., since it is suggested by Fujiwara

et al. such that, the control unit would updates the location table based on the received terminal

identification number and always make the location table up-to-date for easy data access *(See*

Fujiwara et al. Par. 136).

As per claim 8:

Tamatsu teaches a method/system comprising: **a system that holds data having data**

items including primary keys and alternate keys, primary blocks that store the data

records in the order of their primary keys, alternate-key blocks that stores the alternate-

**key entries made up of alternate keys and primary keys in the alternate-key value order,
and alternate-key location table that contains the alternate-key location table entry in a
contiguous region** *(Par. 43)*, **and an accelerator system that holds a frond alternate-key
location table that contains the frond alternate-key location table entries indicating
alternate-key location table entries of each alternate-key block and the identical alternate-
key block in the contiguous region, where said alternate-key frond location table entries,
when the alternate-key location table entry of each alternate-key block is updated, is
synchronously or asynchronously updated based on the newly updated information sent
from the system** *(Par. 6)*.

Tamatsu does not explicitly disclose for the primary system. However Levy et al. teach a
system comprises **primary system** *(See Levy et al. Par. 49)*.

Therefore, it would have been obvious to a person in the art at the time the invention was
made to modify the method disclosed in Tamatsu to have the primary system. This
modification would have been obvious because a person having ordinary skill in the art, at the
time the invention was made, having the teachings of Tamatsu and Levy et al. before him/her,
to modify the system of Tamatsu to include the primary system of Levy et al., since it is
suggested by Levy et al. such that, the primary database server means the primary system and
the queries are performed faster by the primary database server *(See Levy et al. Par.
43)*.

Tamatsu as modified does not explicitly disclose for the transmitting the information of
the modification in the location table and communication mechanism. However Fujiwara et al.
teach a method, **said system transmits modification information of a location of any**

modification in the alternate-key location table such as alternate-key location table entry number and a content of modification to any accelerator connected to the primary system when the alternate-key location table is modified as the alternate-key entry within the alternate-key block is modified in the case that alternate-key modification occurs due to data addition, update, and deletion causing a data modification within the block *(See Fujiwara et al. Par. 197)*; and has a communication mechanism receiving modification information from the primary system when any modification occurs to the alternate-key location table due to data addition, update, and deletion causing data modification within the alternate-key block while transmitting information for completing the application of the modification information to the primary system when the modification is completed and a modification information application mechanism performing necessary updating on the basis of modification information transmitted from the system, and retrieval by means of the alternate-key on said accelerator system is such that a binary search is performed using the frond alternate-key location table of the accelerator system to retrieve the frond alternate-key location table entries with a target key value to determine an object alternate-key block and that retrieval relative to the record within the alternate-key block is performed relative to the alternate-key block in the primary system *(See Fujiwara et al. Par. 9 and see Tamatsu Par. 6)*.

Therefore, it would have been obvious to a person in the art at the time the invention was made to modify the method disclosed in combination of Tamatsu and Levy et al. to have the transmitting the information of the modification in the location table and communication mechanism. This modification would have been obvious because a person having ordinary skill

in the art, at the time the invention was made, having the teachings of combination of Tamatsu

and Levy et al. and Fujiwara et al. before him/her, to modify the system of combination of

Tamatsu and Levy et al. to include the transmitting the information of the modification in the

location table and communication mechanism of Fujiwara et al., since it is suggested by Fujiwara

et al. such that, the control unit would updates the location table based on the received terminal

identification number and always make the location table up-to-date for easy data access *(See*

Fujiwara et al. Par. 136).

Response to Arguments

9.   Applicant's amendment presented on February 20, 2008 has been fully considered but

they are moot in view of the new grounds of rejection presented in this office action.

Conclusion

10.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Fariborz Khoshnoodi whose telephone number is 571-270-1005.

The examiner can normally be reached on M-TH every other F 8:00-4:00.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Charles Rones can be reached on 571-272-4085. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Fariborz Khoshnoodi/
Examiner
Art Unit 2164

/T. M./

Primary Examiner, Art Unit 2165

/Charles Rones/

Supervisory Patent Examiner, Art Unit 2164